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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,934	01/26/2007	Jesus-Angel de Gregorio	P17270-US1	6753

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EXAMINER	
KELLEY, STEVEN SHAUN	
ART UNIT	PAPER NUMBER
2617	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,934	DE GREGORIO ET AL.	
	Examiner	Art Unit	
	STEVEN KELLEY	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *5-4-09*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no antecedent basis for "the physical SSO entry point" as now recited in claim 1 and there is no antecedent basis for "the Single Sign-On service" as now recited in claim 10.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-14 and 19 are rejected under 35 U.S.C. 103(a) as obvious over WO 02/011467 to Jones et al. (hereinafter "Jones") in view of U.S. Pat. Pub. No. 2003/0051041 to Kalavade et al. (hereinafter "Kalavade") and U.S. Patent 7,184,764 to Raviv et al. (hereinafter "Raviv").

Regarding claim 1, it is noted that the recited term "Single Sign-On" may be broadly interpreted to mean signing on to a network one time. Regarding the structures recited

in claim 1, Jones teaches a visited Serving GPRS Node 27, which is connected to a Roaming RADIUS Server 37 and a Home RADIUS server 34, which are connected and function as recited in claim 1. See for example, Figs. 1 and 4, the description thereof. Additionally, as the system described in Jones operates with a home server 34 located in San Francisco and a roaming server 37 located in New York, the visited GPRS support node 27 included within the Radio Network Controller 24, may be interpreted as the claimed "global Single Sign-On Front End infrastructure." Although Jones teaches that the visited AAA (RADIUS) server 37 communicates with the home AAA server 34, Jones does not explicitly disclose that the visiting AAA server "binds the home AAA server address with the user's identifiers." In an analogous art, Kalavade teaches a system for consolidated billing used with roaming wireless devices. See for example, Fig. 1 of Kalavade. Kalavade teaches that a user may enter a phone number and password via a Converged Billing /Authentication Gateway (CBG) server 10, in order to access services in a home network. Kalavade also includes a CBG database 14 used to store information relating to a roaming user and related information. Kalavade shows (on pages 11-13) the details of the information stored relating to a roaming user, which include IP addresses of WLAN endpoints, such as for example, a home billing system or HLR, etc. Therefore, in order to increase the efficiency of billing procedures and communications, it would have been obvious to modify the visited AAA server of Jones to include the capability of binding a user's identifiers with a home AAA server as taught by Kalavade.

Regarding the amendments to claim 1, which now recite that "each service provider in the federation providing a specific Uniform Resource Identifier (URI) as the physical SSO entry point towards the federation", Jones and Kalavade do not explicitly teach this feature, although Jones does teach (on page 11) using a network access identifier such as "user@realm" and identifying one of a number of service providers.

In an analogous art, Raviv teaches a system for allowing roaming mobile devices to access their home networks via a visitor portal 500 (see for example, Fig. 5). Raviv teaches in column 22, lines 13-26, that "The visitor portal database may store the VPN/corporate network address (URL), connection type, and the nature of the user's association with the network." Additionally, Raviv teaches in column 22, line 58 to column 23, line 7, that "The interfacing apparatus 604 then connects the WAP phone 600 directly to the URL of the data service network server, and manages data communications between the device and the service network until the device exits the data service". It is noted that as a URL is a subset of, or a specific type of URI, a URL may be interpreted as being a URI, as recited.

Therefore, as Raviv teaches the conventionality of providing network services to roaming users via a URI, it would have been obvious to one of ordinary skill in the art to modify the system of Jones/Kalavade to additionally provide a URI from each service provider (as recited) in order to efficiently provide a direct link (and communications) to a user's home network.

Regarding claims 2-3, the CBG database 14 of Kalavade teaches the recited features of the "Global Directory".

Regarding the information recited in claims 4-6, as described above, Kalavade shows on pages 11-13 the details stored in the CBG database, which include the recited IP addresses, user identifiers, passwords and time stamp recited in these claims.

Regarding claims 7-9, Jones teaches a roaming agreement between ISPs, which meets the recited "number of service providers." Although Jones shows only one visited GPRS node 27 used to access a visited network, it is common for a plurality of networks to be connected. Kalavade teaches in section [0204] that each network and/or "hot spot" "typically has its own authentication infrastructure". Therefore it would have been obvious to modify Jones to include sign on infrastructure for each connected network and/or service provider, in order to allow roaming users to sign on to any available network.

Regarding claim 10, as described above, Jones teaches a system for authenticating roaming users. Figs. 3-5 of Jones shows the claimed steps of (a) authenticating a roaming user in a visited packet radio network, via a proxy (see page 9 lines 26-29 of Jones which teaches that "In decision step 3, the partner radius server 37 verifies user ID and password", where the visited partner radius server 37 "authenticates" and acts as a "proxy", as now recited) (b) creating a master session at the user's home service network (c) redirecting a user towards the user's home network

and (d) receiving an authentication from the home server. Jones does not explicitly disclose that the master session created in the user's home network is created with "Single Sign-On related data, as recited in step (b). As described above, Kalavade teaches a system for consolidated billing used with roaming wireless devices where a user may enter a phone number and password via a Converged Billing /Authentication Gateway (CBG) server 10, in order to access services in a home network. Kalavade further teaches of forwarding "single sign on related data" such as the entered phone number, IMSI number and information as shown in the table on pages 11-13, to backend accounting and billing servers/systems. Therefore, in order to correctly track, identify and bill roaming users within a network, it would have been obvious to modify the home RADIUS server of Jones to include the capability of creating a master session with single sign on related data, as shown in Kalavade.

Regarding the amendments to claim 10, which now recite that "each service provider in the federation providing a specific Uniform Resource Identifier as the Single Sign-On service", Jones and Kalavade do not explicitly teach this feature, although Jones does teach (on page 11) using a network access identifier such as "user@realm" and identifying one of a number of service providers.

In an analogous art, Raviv teaches a system for allowing roaming mobile devices to access their home networks via a visitor portal 500 (see for example, Fig. 5). Raviv teaches in column 22, lines 13-26, that "The visitor portal database may store the VPN/corporate network address (URL), connection type, and the nature of the user's association with the network." Additionally, Raviv teaches in column 22, line 58 to

column 23, line 7, that "The interfacing apparatus 604 then connects the WAP phone 600 directly to the URL of the data service network server, and manages data communications between the device and the service network until the device exits the data service". It is noted that as a URL is a subset of, or a specific type of URI, a URL may be interpreted as being a URI, as recited.

Therefore, as Raviv teaches the conventionality of providing network services to roaming users via a URI, it would have been obvious to one of ordinary skill in the art to modify the system of Jones/Kalavade to additionally provide a URI from each service provider (as recited) in order to efficiently provide a direct link (and communications) to a user's home network.

Regarding claims 11 and 13, Kalavade shows a table on pages 11-13 that include the recited IP addresses, user identifiers, passwords and time stamp, recited in these claims.

Regarding claim 12, Kalavade teaches assigning a GRPS node to the user and transmitting the address of the GGSN used. See for example, Fig. 11 and information in the table on pages 11-13.

Regarding claim 14, Jones shows the visited AAA server 37, connected and acting as a proxy between the GPRS Support node and the home AAA server.

Regarding claim 19, Kalavade teaches providing addresses of devices (recited "entities") validating and authenticating user information.

6. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones and Kalavade as applied to claims 1-14 above, and further in view of U.S. Patent 6,578,085 to Khalil et at. (hereinafter "Khalil"). Claim 15 recites "determining the visited network which assigned the current IP address to the user". Khalil teaches tracking IP addresses assigned to a mobile node, where the IP addresses are assigned by a number of foreign networks. Khalil further teaches "determining visited networks which assigned IP addresses to a user", as shown in Figs. 10-13, which detail and describe the communications between the home and foreign networks regarding the registering and deregistering of IP addresses assigned to the mobile node by the foreign networks. Therefore, in order to correctly track, identify and bill roaming users within a number of networks, it would have been obvious to modify the Jones/Kalavade combination to include the capability of determining visited networks, as shown in Khalil.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kelley whose telephone number is (571) 272-5652. The examiner can normally be reached on Monday-Friday, 9AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SSK

/Lester Kincaid/

Supervisory Patent Examiner, Art Unit 2617